

DAIDBEKOVA, E.A.; KURBANOVA, F.M.

Lithofacies characteristics of sediments in the producing formation
of the lower Kura Valley in connection with their oil potential.
Azerb. neft. khoz. 38 no.8:13-15 Ag '59. (MIRA 13:2)
(Kura Valley--Petroleum geology)

DAIDBEKOVA, E.A.
DAIDBEKOVA, E.A.

Mineral and geochemical facies of sediments in the flysch formation
of the southeastern Caucasus. Trudy AzNII DN no.9:44-53 '60.
(Caucasus--Flysch) (MIRA 14:5)

DAIDBEKOVA, E.A.; POKIDIN, A.K.

Lithological and thermographic characteristics of carbonate rocks
in the southeastern Caucasus. Trudy AzNII DM no.10:122-130 '60.
(MIRA 14:4)
(Caucasus--Rocks, Carbonate)

DAIDBEKOVA, E. A., Doc GEOL ~~AND~~ MINERAL SCI, "PETROGRAPHY
OF THE FLYSCH FORMATION OF ^{the} SOUTHEASTERN CAUCASUS." BAKU,
1961. (JOINT COUNCIL OF AZERBAYDZHAN INST OF PETROLEUM
AND CHEM IMENI M. AZIZBEKOV AND INSTITUTES AND INSTITUTIONS
OF ACAD SCI AZSSR FOR GEOL AND MINERAL SCIENCES). (KL-DV,
11-61, 212).

DAIDBEKOVA, E.A., IBRAGIMOVA, B.M.

Hydrotroillite in deposits of the akchagyl stage in the Kura Lowland.
Dokl. AN SSSR 137 no.3:678-680 Mr '61. (MIRA 14:2)

1. Azerbayzhanskiy nauchno-issledovatel'skiy institut po dobyshe
nefti. Fredstavleno akademikom N.M.Strakhovym.
(Kura Lowland--Hydrotroillite)

DAIDBEKOVA, E.A.; POKIDIN, A.K.; ISMAYLOVA, R.S.

Mineralogy of clays of Cretaceous sediments of the southeastern
Caucasus. Biul.MOIP.Otd.geol. 36 no.6:37-48 N-D '61.

(MIRA 15:7)

(Caucasus--Clay)

DAIDBEKOVA, E.A.; BABAYEVA, R.S.; GRIGOR'YANTS, Z.G.; KURBANOVA, F.M.;
IBRAGIMOVA, B.M.; SHAMALLOVA, O.D.

Granulometric types of rocks and allothigene minerals. Trudy
(MIRA 18:12)
GIN no.115:29-67 '65.

DAIEV Khr

S/075/60/015/004/013/030/XX
B020/B064AUTHORS: Yordanov, N. and Daiyev, Khr.TITLE: Photometric Determination of Cerium by Means of o-TolidinePERIODICAL: Zhurnal analiticheskoy khimii, 1960, Vol. 15, No. 4.
pp. 443 - 445

TEXT: The present paper describes a new, unpublished method for a more selective and accurate determination of tetravalent cerium with o-tolidine (3,3'-dimethyl benzidine); the qualitative reaction has been known since long, but has hitherto not been used for quantitative cerium determination. Cerium was separated from the disturbing components together with the rare earths in the form of oxalates. If there are no rare earths present in the analyzed material, lanthanum nitrate is added, and the oxalates are precipitated. A 12 mg/ml $\text{La}(\text{NO}_3)_3$ solution was used in the experiments

Since the lanthanum nitrate available contained approximately 0.14% Ce. it was purified by the method of V. M. Klinayev and N. N. Senyavin (Ref. 12) The optical density of the solution was measured with a photoelectric

Card 1/3

Photometric Determination of Cerium by Means of o-Tolidine S/075/60/015/004/013/030/xx
B020/B064

colorimeter of the type FEK-M (FEK-M) with a blue filter (permeability maximum at $410 \text{ m}\mu$). Fig. 1 shows that the solutions follow the Beer law at concentrations up to $3 \gamma \text{ Ce}/\text{ml}$. The molar extinction coefficient is approximately 9500. The reaction with o-tolidine is 20 times as sensitive as with H_2O_2 . The coloring produced remained stable for several hours under the chosen conditions, and vanished only on the following day. The yellow color remains unchanged for 20 minutes after the addition of the reagent; then it fades gradually (Fig. 2). A change of pH between 0 and 4 has no appreciable effect upon the sensitivity of the reagent. When using 12 mg of $\text{La}(\text{NO}_3)_3$ as a collector, the coprecipitation of $10 - 200 \gamma \text{ Ce}$ proceeds quantitatively. Table 1 shows the reproducibility of the method, which is mainly due to the quantitative conversion of Ce^{III} to Ce^{IV} , and also the stability of the oxidation products of o-tolidine. The effect of Fe, Al, Mn, and Ti in amounts of $\text{Ce:Fe} = 1:10,000$, $\text{Ce:Al} = 1:3,000$, $\text{Ce:Mn} = 1:350$, and $\text{Ce:Ti} = 1:100$ was studied for the purpose of using this method for cerium determination in minerals and rocks. Fig. 1 shows the calibration curve used to determine cerium by means of o-tolidine. The time dependence of the optical density is illustrated in Fig. 2. Table 2

Card 2/3

Photometric Determination of Cerium by Means of o-Tolidine S/075/60/015/004/013/030/XX
B020/B064

shows that under the above conditions, the coprecipitation of cerium proceeds practically quantitatively, that even in the presence of comparatively large iron and aluminum quantities, no soluble cerium oxalate complexes of these elements are formed, and that in the precipitation of both hydroxides and oxalates, no coprecipitation of manganese takes place in the presence of hydroxylamine hydrochloride. The fact that a number of elements is not coprecipitated with lanthanum oxalate, is also related to the separation of the latter in acid media. Thorium, yttrium, neodymium, praseodymium, ytterbium, terbium, and samarium have no disturbing effect. The method described was used to determine the cerium content in apatite, titanite, and monzonite (Table 3). There are 2 figures, 3 tables, and 12 references: 6 Soviet, 5 German, and 1 British

ASSOCIATION: Sofiyskiy gosudarstvennyy universitet (Bulgariya) (Sofiya State University (Bulgaria))

SUBMITTED: July 9, 1959

Card 3/3

IORDANOV, N.; DAIKOV, Khr.

Separation of small amounts of rare earth elements from minerals and rocks by chlorination with carbon tetrachloride.
Zhur.anal.khim. 17 no.4:429-431 J1 '62. (MIRA 15:8)

1. Institute of General and Inorganic Chemistry, Bulgarian Academy of Sciences, Sofia.
(Rare earths--Analysis) (Carbon tetrachloride)

ICHIDANOV, N.; DAIYEV, Kh. [Daiev, Kh.]

The N, N, N', N' tetramethyl o-tolidine (Tetron) as reagent in determining small quantities of oxidants (Au (III), Ce (IV), BrO_3 etc.) Doklady BAN 16 no.1:69-72 '63.

1. Predstavleno chl.-korr. N. Penchevym.

JORDANOV, N.; DAIEV, Khr.

Distribution of cerium, and amount of other earth elements in certain effusive, intrusive, and metamorphic rocks in southern Bulgaria. Doklady BAN 17 no. 1849-52 '64

1. Predstavleno chlenom-korrespondentom N. N. Penchevym.

DAIKHES, A. I.

Professor Il'ia Mironovich Burakov; on his 70th birthday. Vest.
otorin. no. 2:123 '62. (MIRA 15:2)

(BURAKOV, IL'IA MIRONOVICH, 1891-)

RUBIN, S.S.; DAILEVSKIY, A.F.; IL'CHENKO, V.A.; KARASYUK, I.M.

Methods of studying the root systems of agricultural plants.
Bot. zhur. 47 no.8:1176-1184 Ag '62. (MIRA 15:10)

1. Umanskiy sel'skokhozyaystvennyy institut imeni A.M. Gor'kogo.

DAILIBONIENE, Jadviga; KAVINSKIENE, L., red.

[Tuberculosis, an infectious disease] Tuberkulioze -
uzkreciama liga. Vilnius, Valstybine politines ir
mokslines lit-ros leid kla, 1963. 16 p. [In Lithuanian]
(MIRA 17:7)

DAILIDONIENE, J.

Tuberculosis morbidity in the Republic according to fluorographic data. Sveik. apsaug. 9 no.3:36-39 Mr'64

1. Respublikinio tuberkuliozes dispanserio vyr. gydytoja.

*

DAILIDONIENE, J.

Tuberculosis morbidity in the Republic according to fluorographic data. Sveik. Apsaug. no.3:36-39 '64.

1. Lietuvos respublikinio tuberkuliozes dispanserio vyr.
gydytoja.

DAIMACA, Victor, prof.

Celestial phenomena in December 1961. Gaz mat fiz 13 no.10:559-560 1961

(Mechanics, Celestial)

DAIMACA, Victor, prof.

Data on celestial phenomena in February 1962. Gaz mat fiz 13 no.12:
663-664 D '61.

DAIMACA, Victor, prof.

Celestial phenomena of March 1962. Gaz mat fiz 14 no.1:54-55 Ja '62.

DAIMACA, Victor, prof.

Celestial phenomena of April 1962. Gaz mat fiz 14 no.2:110-111 F '62

DAIMACA, Victor, prof.

Celestial phenomena in May 162. Gaz mat fiz 14 no. 3:167-168. Mr '62

DAIMACA, Victor, prof.

The celestial phenomena in June 1962. Gaz mat fiz 14 no.4:
220-221 Ap '62.

DAIMACA, Victor, prof.

The celestial phenomena in July 1962. Gaz mat fiz 14 no.5:
279-280 My '62.

DAIMACA, Victor, prof.

Celestial phenomena in the month of August, 1962. Gaz mat fiz
14 no.6:333-334 Je '62.

DAIMACA, Victor, prof.

Celestial phenomena in September 1962. Gaz mat fiz 14 no.7:
391-392 J1 '62.

DAIMACA, Victor, prof.

Celestial phenomena in October 1962. Gaz mat fiz
14 no.8:445-446 Ag '62.

DAIMACA, Victor, prof.

Celestial phenomenon in November 1962. Gaz mat fiz 14 no.9:503-504
8 '62.

DAIMACA, Victor, prof.

Celestial phenomena in December 1962. Gaz mat fiz 14 no.10:559-560
0 '62.

DAIMACA, Victor, prof.

Celestial phenomena in January and February 1963. Gaz mat fiz 14,
no. 11/12:653-655 N-D '62.

DAIMACA, Victor, prof.

Celestial phenomena in March 1963. Gaz mat fiz 15 no.1:55-56
Ja '63.

DAIMACA, Victor, prof.

Celestial phenomena in April 1963. Gaz mat fiz 15 no.2; 110-111 P
'63.

DAIMACA, Victor, prof.

Celestial phenomena in May 1963. Gaz mat fiz 15 no.3:166-167
Mr '63.

LAJNECA, Victor, prof.

Astronomical data, 1982 out file 15 no.4.:21-222 Ap 163.

DAIMACA, Victor, prof.

Celestial phenomena in July 1963. Gaz mat fiz 15 no.5:277-278
My '63.

DAIMACA, Victor, prof.

Celestial phenomena in August 1963. Gaz mat fiz 15 no.6:
335-336 Je '63.

DAIMACA, Victor, prof.

Celestial phenomena in September 1963. Gaz mat fiz 15 no.7:390-391 Jl '63.

DAIMACA, Victor, prof.

Celestial phenomena in November 1963. Gaz mat fiz 15 no.9:504-
505 S '63.

DAIMACA, Victor, prof.

Celestial phenomena in December 1963. Gaz mat fiz 15
no.10:558-559 0'63.

DAIMACA, Victor, prof.

Celestial phenomena in October 1963. Gaz mat fiz 15
no. 8: 447-478 Ag '63.

DAIMACA, Victor, prof.

Celestial phenomena in January 1964, Gaz mat fiz 15 no.11:
667-668 N '63.

DAIMACA, Victor, prof.

Astronomical data. Gaz mat fiz 15 no.12:724-725 1963.

DAIMACA, Victor, prof.

Planetary phenomena in May 1964. Gaz mat fiz 69 no. 4:
156-157 Ap '64.

DAIMACA, Victor, prof.

Astronomical data. Gaz mat fiz 69 no. 5:197 My '64.

BAIMACA, Victor, prof.

Planetary phenomena during July 196... 542 pag. 113 63
no.61231-232 Je'64.

DAIMACA, Victor

Planetary phenomena in August 1964. Gaz mat fiz 63 no. 7:
278 J1 '64.

LAIMACA, Vistor, prof.

Astronomical data. Ges. mat. fiz 69 no.2819 Ag'td.

DRIFĂ A, Victor, prof. (Bucureşti)

Planetary phenomena in 1964. Geomat. fiz. 64 z. 3, 1964, Nr. 3, 2.

DAIMACA, Victor, prof.

Astronomical data. Gaz mat fiz 69 no.9:360 S '64.

DAIMACA, Victor, prof.

Astronomical data. Gaz mat fiz 69 no.10:400-401 0 '64.

DAIMACA, Victor, prof. (Bucuresti)

Astronomical data. Gaz mat fiz 69 no.11:439-440 N '64.

DAIMACA, Victor, prof.

Astronomical data. Gaz mat fiz 70 no.2:75 F '65.

DAIMACA, Victor, prof.

Astronomical data. Gaz mat fiz 70 no.4:159 Ap '65.

DAIMACA, Victor, prof.

Astronomical data. Gaz mat fiz 70 no.3:119 Mr '65.

U 2
The use of the hydrolysis of monochloroacetic acid for
absolute actinometric measurements (L. I. Bain and E.

I. S. Puseykin - *Ber. Akad. Wiss. Berlin*, phys.
Chem. 6, 75-81 (1934). - To test the method the quantum
yield in the photolysis of H_2O_2 was measured. The
results obtained in this manner for the quantum yields
of H_2O_2 values of different comens. are in agreement with
those of Allmand and Style (J. A. 26, 371) who mea-
sured the energy absorbed with thermopiles. The method
is particularly suited to values which absorb strongly
W. B. Keighton

APPENDIX: ATTACHMENT LISTING FOR CLASSIFICATION

CA

PROCESSES AND PROPERTIES INDEX

3

The action of inhibitors in the photochemical dissociation of hydrogen peroxide. B. Dain and A. Shvartz. *Acta Physicochim. U. R. S. S.* **3**, 20 (1935) (in English); *J. Phys. Chem. (U. S. S. R.)* **7**, No. 2 (1936) (in Russian). On the basis of data previously published (*J. Phys. Chem. (U. S. S. R.)* **4**, 478 (1933)) D. and S. conclude that the photochem. decompn. of H_2O_2 goes by way of HO radicals and is defined by the rate equation $-d[H_2O_2]/dt = k_1^2 ([H_2O_2])^2$. By a study of the decompn. of pure H_2O_2 and of H_2O_2 with from 1×10^{-3} up to 2×10^{-3} moles added ketone per l. it was found that, the rate of decompn. of H_2O_2 at 75° illuminated by light from a Hg-vapor lamp is reduced to $\frac{1}{4}$ by 91×10^{-3} , 20×10^{-3} and 20×10^{-3} moles per l. resp., of Me_2CO , $MeCOEt$ and Et_2CO . The correction for internal absorption of light by ketone was never over 5%. The ratios $k_2 = V_2/V_1$ for the velocities of inhibited and uninhibited reaction are linear functions of the ketone concn. The energy of activation for reaction of hydroxyl with a ketone is of the order 25-30 Cal. D. and S. assume that only primarily OH reacts with the ketone, leading to a decrease in the initial no. of chains rather than to breaking of chains already initiated.

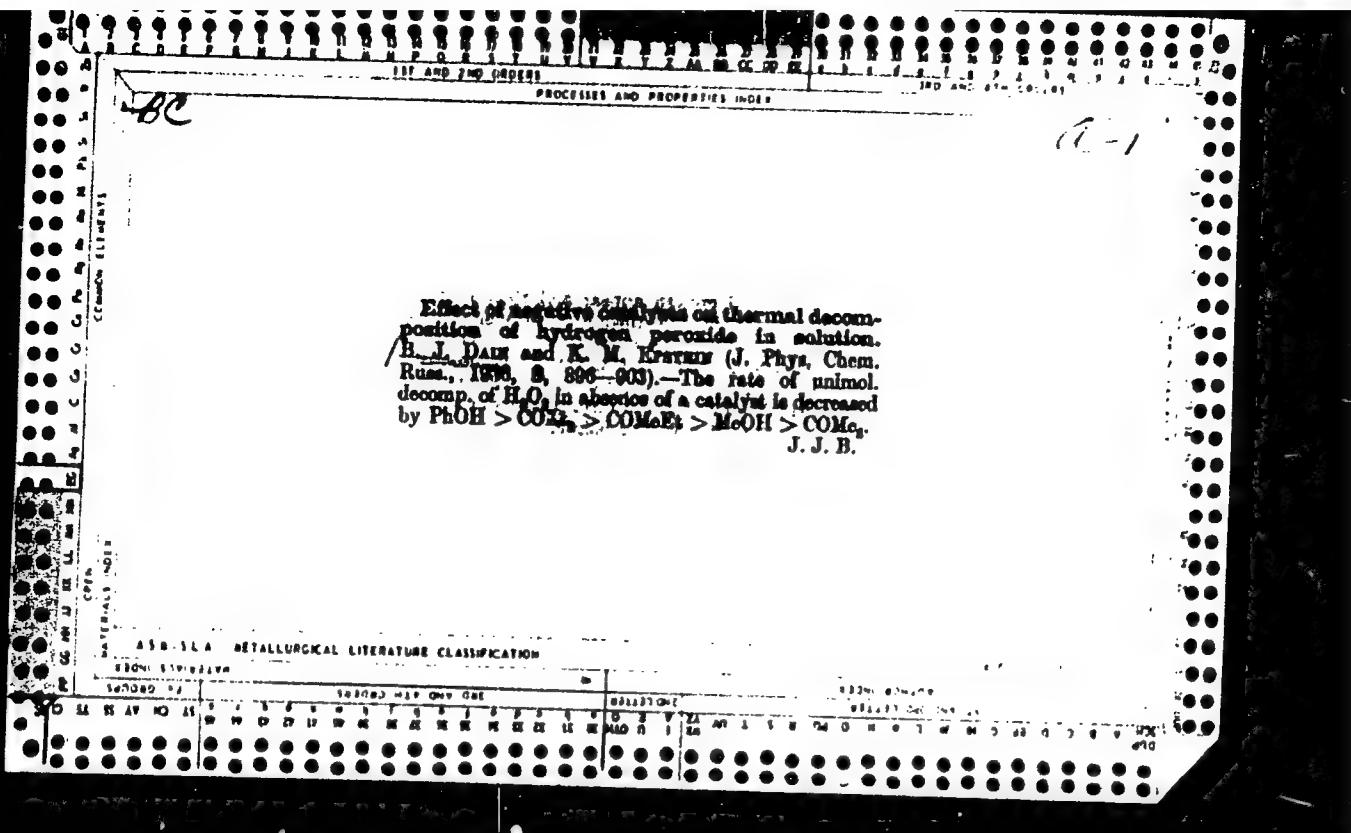
F. H. Rathmann

Method of spectral analysis of complicated mixtures
B. Ya. Dan, I. V. Granovskii and E. S. Efrenkin. *J. Gen. Chem. (U.S.S.R.)*, 1951, 21(15). Standards for
the quantitative analysis of the system Mn-Cu
and the effect of impurities (chromium, Ni, Cr,
Be, Al, Si and Fe) on the absorption of Mn-Cu
are indicated. (S. I. Moshkov)

7

Qualitative spectral analysis of manganese ores. B.
Ya. Dau, I. V. Grunovskii and E. S. Puzenkin. *Ber.*
Inst. fizich. Chem. Akad. Nauk Ukr. SSR, **5**, 267-73
(1936); *cf. C. I.*, **30**, 900. - Calculated measurements of
wave lengths in the green ultraviolet portion of the arc
spectrum show that Be can be identified by the lines of
3141.1, 3130.4, 2650.9, 2651.4 Å., 2 lines of higher wave
lengths being covered by Mn-lines; Ti lines of 3372.6
3219.4 Å. are not obscured by Mn or Fe. After elimina-
tion of Fe by the Rote method Co is identified by the line
of 5200.5 Å. and Ni by the lines of 5478.9, 5081.1,
4711.4, 3619.4, 3521.5, 3515.1, 3414.8, 3380.6 Å. Elimina-
tion of Mn as Mn₃ permits the identification of Cr
and Mo. J. G. Tolpuk

AER-31A METALLURGICAL LITERATURE CLASSIFICATION



BC

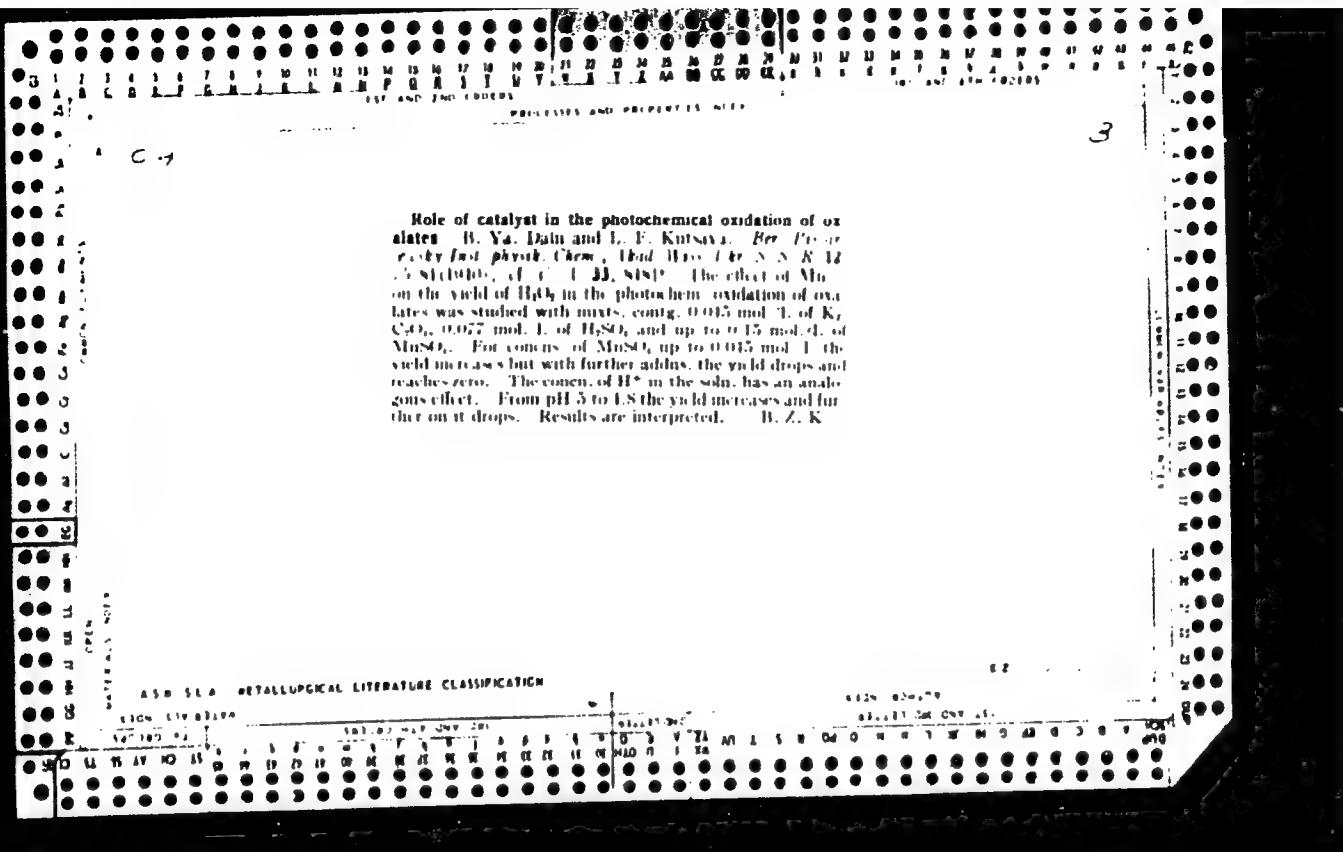
A-1

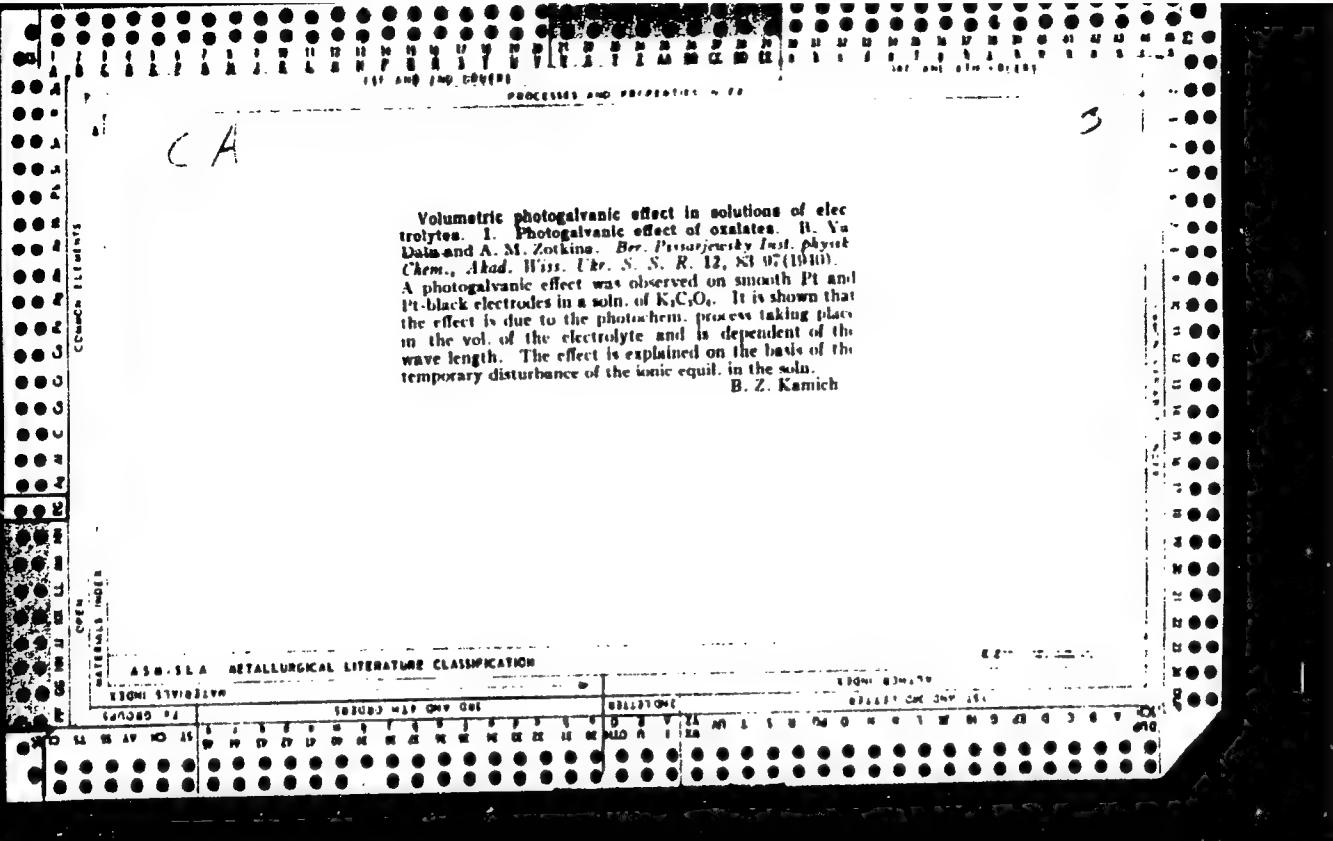
Auto-oxidation of oxalates, and so-called active
oxalic acid. B. DAIM, V. BAKHTATENKO, and A.

SCHWARZ (Acta Physicochim. U.R.S.S., 1938, 9,
640-664).—The photochemical auto-oxidation of
 $H_2C_2O_4$ and oxalates in absence of the ions of heavy
metals is very slight but is increased by the addition
of mineral acids. In the dark, auto-oxidation occurs
in presence of Mn^{++} or Pt . The reaction is
characterised by an induction period which is
shortened by increasing $[Mn^{++}]$ or p_x . The oxidation
is discussed on the basis of chain reactions, and also in
relation to the activated $H_2C_2O_4$ observed in photo-
chemical experiments with Eder's solution.

C. R. H.

ASA-11A METALLURGICAL LITERATURE CLASSIFICATION





CA

PROCESSED AND INDEXED 4/21/68

Photochemical reaction in the region of electron affinity spectrum of chromium ions in solution. H. A. Dahl and L. Liberman. *Compt. rend. Acad. sci. U. R. S. S.* **20**, 228-30 (1940) (in English). The absorption band of ferrion at about 2800 Å. has been interpreted by Potterill, Walker and Weiss (C. A. **30**, 8621) as the electron-affinity spectrum and the primary photochemical reaction as the splitting off of an electron. D. and L. have carried out an investigation to see if a similar photochemical occurs in the near-ultraviolet absorption of chromonium ion. The reaction was followed by the rate of H evolution. By use of appropriate filters it was shown that only the near-ultraviolet caused the evolution of H. In a 0.1 M soln., to which acetyl was added, the reaction begins after the fortieth min., and proceeds at a const. rate; the apparent induction period is due to the satn. of the soln. with H before evolution, and the rate of evolution scarcely changes with a change in temp. from 17° to 50°. The rate const. at 17° is 0.0001 and at 50° is 0.0001. The reaction is quite simple and if it does not take place in one step, the secondary step requires no considerable activation. For this reason the splitting off of the electron as the primary process seems most probable. — J. P. McReynolds

142

2

The problem of the mechanism of decomposition of sodium hypochlorite. T. B. Oldman and R. V. Dunn. *J. Gen. Chem. (U. S. S. R.)* 11, 190-6 (1941).—The decomposition of NaClO goes in two directions: (1) with evolution of O₂: $2\text{ClO} \rightarrow \text{ClO}_2 + \text{O}_2$, and (2) with formation of chlorate: $2\text{ClO} \rightarrow \text{ClO}_3^- + 2\text{Cl}^-$. The removal of the heterogeneous admixts. changes the direction of the kinetic curve of the evolution of O₂. The curve attains an autocatalytic character. Filters of different porosity were used for the filtration. The purer solns. were more stable. A NaClO soln. made from very pure chemicals proved to be very stable. The catalyst increases the decompos. of NaClO in both directions, but it is less noticeable in the reaction with formation of chlorates. The investigation leads to the assumption that both directions of the decompos. of NaClO are based on the same primary process. 11 references. S. Macleod

1.1.1.4. METALLURICAL LITERATURE CLASSIFICATION

卷之三

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000509520017-2"

Electron affinity spectra of dissolved positive ions. B. Ya. Dain, B. F. Kutsaya and R. A. Liberman. *Dopordi Akad. Nauk D. R. S. S. Physico-Chem. and Math. Ser. Sov. 1942, No. 1-2, 41-44* (in Russian, 43, in English, 43).—The position of the long wave limit of the spectrum for Ca^+ as well as Fe^+ ions coincides with the work of breaking away of the electron from the dissolved ion. The primary act in both cases is an electronic transition taking place within the complex of the ion-hydrated shell. J. S. J.

2.2.2.2. METALLURGICAL LITERATURE CLASSIFICATION

5-122

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000509520017-2"

DAIN, B. Ya; KUTSAYA, B. F.; LIBERZON, E. A.

Inst of Physical Chemistry imni L. V. Pisarzhevskiy, Acad. of Sci. (-1941-)

"Reactions in the Spectrums of Electron Affinity of Ions of Bivalent Chromium and Iron." Zhur. Fiz. Khim., Vol. 17, No. 4, 1943

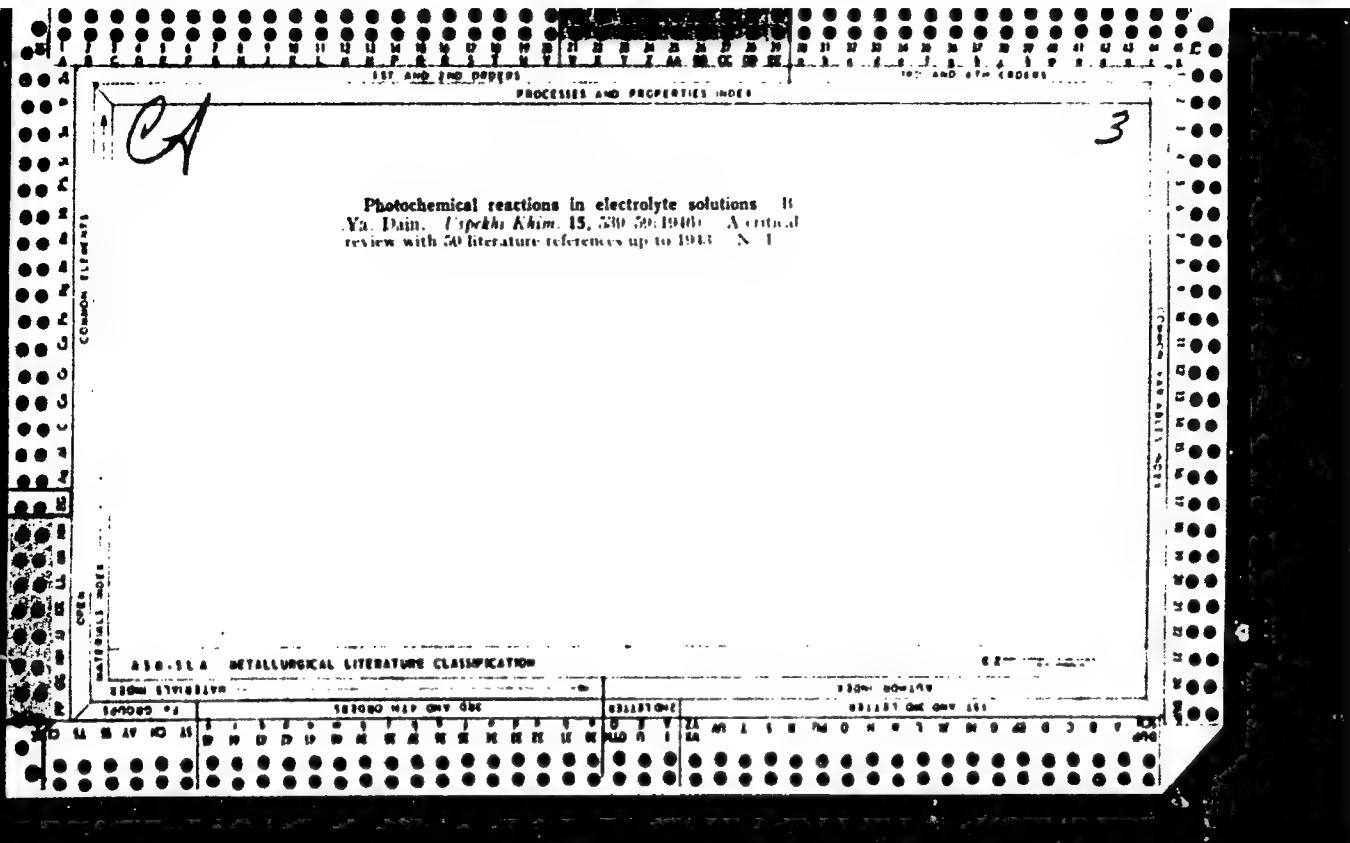
BR-5205019

Electro-affinity spectra of chromous ions. B. Ya. Dais¹ and R. Lihorad. *Acta Physicochim. U.R.S.S.* 19, 410-20 (1944); cf. *C.A.* 38, 18554. The long-wave limit of the absorption band of CrSO_4 is at 3500 Å. Changes in H^+ concn. do not change the spectrum, which is ascribed to hydrated Cr^{++} ions and represents an electro-affinity spectrum of Cr^{++} . This interpretation is confirmed by the photochemical data. The H_2 evolved on irradiation of $\text{Cr}(\text{OH})_3$ by ultraviolet light, measured in a microburet, is increased only 1.8 times by a 40-fold increase in H^+ concn. The addition of $\text{Cr}_2(\text{SO}_4)_3$ in different amounts does not inhibit the yield of H_2 , i.e., Cr^{++} is not reduced by it. This explains a greater quantum yield than that obtained for Fe^{++} . The quantum efficiency is about 0.41 measured actinometrically with respect to the photohydrolysis of $\text{CICH}_2\text{CO}_2\text{H}$. Thus H_2 ions do not participate in the process but the electron transfer must occur inside the complex ion-hydration layer, with the formation of a transition state from which it is liberated directly.

Janet K. Austin

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000509520017-2"

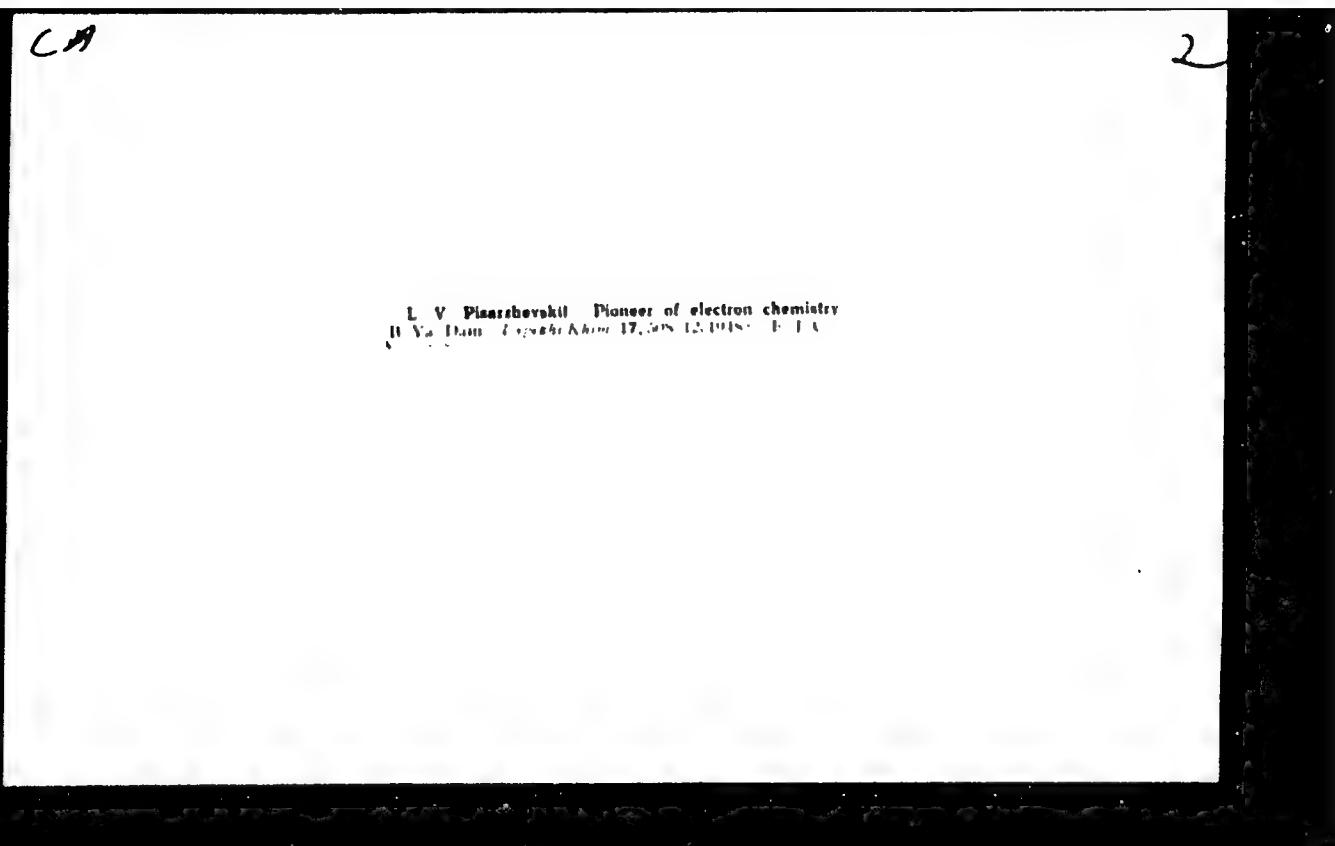


CA

3
New data on electronic transport bands in electrolyte
solutions. B. Ya. Dalm. *Izv. Akad. Nauk SSSR*,
Ser. Fiz. 12, 313-18 (1948). Absorption curves were taken
on solns. of $\text{Fe}(\text{ClO}_4)_2$ and $\text{Cu}(\text{ClO}_4)_2$ in H_2O , EtOH ,
 MeOH , BuOH , and in solns. contg. variable amts. of
 HClO_4 . If such acidified solns. are frozen in a vacuum and
illuminated with ultraviolet light, a small development of
O can be observed as well as formation of Fe^{++} ions from
ultraviolet absorption by Fe^{+++} ions; it is shown that the
photochem. effect takes place on hydrated ions only.
The long-wave threshold of the absorption band is shifted
toward longer wave lengths in alc. solns. of increasing mol.
wt. Photochem. tests in alc. show an increase in H and
aldehydes in the solvent upon illumination. S. P.

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000509520017-2



APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000509520017-2"

FATH, R. YA.

IA 9/49T9

USSR/Chemistry - Tungstates, Reduction of Jun 48
Chemistry - Molybdates, Reduction of

"New Data on the Structure of Molybdenum and Tungsten Blue Derivatives," Z. M. Taysberg, B. Ya. Dain, Inst of Phys Chem imeni L. V. Pisarzhevskiy, Acad Sci Ukrainian SSR, 5 3/4 pp

"Zhur Obshch Khim" Vol XVIII(LXX), No 6 - p. 437

Prepares and investigates absorption spectra of molybdate and tungstate reduction products in presence of phosphorous, silicon, boron and arsenic salts. Compounds have various spectra and can be regarded as derivatives of molybdenum and tungsten blue. Submitted 28 Jan 1947.

9/49T9

3

Photochemical oxidation-reduction reactions in electrolyte solutions. Absorption spectra of iron perchlorate solutions in ethanol. T. S. Glikman, B. Ya. Dulin, and B. F. Kutsaya. *Zhur. Fiz. Khim. (J. Phys. Chem.)* 22, 905-12 (1948).—Aq. 0.008 M $\text{Fe}(\text{ClO}_4)_3$ + 0.8 M HClO_4 has an absorption band with a max. near 240 m μ ; the absorption reaches a definite small intensity at 320 m μ . When 98% EtOH is substituted for water, the max. remains almost unaffected but the long-wave part of the spectrum is shifted toward red so that the i is reached at 400 m μ . Solns. of 0.008 M $\text{Fe}(\text{ClO}_4)_3$ + 0.15 M HClO_4 and of 0.008 M $\text{Fe}(\text{ClO}_4)_3$ + 0.90 M HClO_4 in 98% EtOH had this i at 400 m μ and 380 m μ , resp., the position of the max. remaining unchanged. The max. corresponds to absorption by solvated ferric ions while the long-wave part of the band is due to products of solvolysis or hydrolysis. In this part, the Lambert-Beer law is not valid. These results are used for elucidating the mechanism of the photo-chem. reduction of Fe^{+++} in the presence of EtOH.
J. J. Bikerman

ASR-1A METALLURGICAL LITERATURE CLASSIFICATION

DAIN, B. YA.

PA 11/49T12

USSR/Chemistry - Spectra, Absorption
Chemistry - Iron, Ferric

Jul 48

"Nature of the Ultraviolet Bands Absorbing Tri-
valent Iron Ions," B. Ya. Dain, A. A. Kachan, Inst
Phys Chem imeni L. V. Pisarzhevskiy, Acad Sci USSR,
3½ pp

"Dok Ak Nauk SSSR" Vol LXI, No 3

Reports experiments. Results confirm view that
spectrum band of Fe^{3+} ions is an "electron trans-
fer spectrum." Submitted 24 Apr 48.

11/49T12

AYSBERG, Z.M.; DAIN, B.Ya.

Chemical nature of the derivatives of molybdenum and tungsten blues.
Dop. AN URSR no. 5:33-38 '49. (MIRA 9:9)

1. Institut fizichnoi khimii imeni L.V. Pisarsheva'kogo AN URSR Viddil
fotokhimii. Predstaviv diyseniy chlen AN URSR O.I. Brods'kiy.
(Pigments)

DAIN, B. YA

PA 54/49T102

USER/Physics
Ions
Catalysis

JUL 49

"Heterogeneous Phenomena in the Photoreduction Process of Ions in a Tetravalent Series," B. Ya. Dain, A. A. Kachan, Inst of Physicochem. imeni L. V. Pisarzhevskiy, Acad Sci USSR, 3 3/4 pp

"Dok Ak Nauk BSSR" Vol LXVII, No 1

Experiments cited show that in the photoreduction reaction of a perchlorate in a tetravalent series, influence of the walls of the container on the basic process is very great, and is of a clearly catalytic

USER/Physics (Contd)

54/49T102
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nature. Aftereffect is not completely explained, but is connected with the observed catalytic effect. Submitted by Acad A. N. Terenin 3 May 49.

54/49T102

DAIN, U. S.

Journal Sci. Russ.
V. 8 part 5, 1950
Biology & Medicine

CONCERNING THE NATURE OF THE REACTION OF
CHLOROPHYLL WITH INORGANIC IONS. M. S. Ashkinazi,
T. S. Glikman, and B. [Ya.] Dahn. [Translated by]
L. V. Pisarzhevskii [Pisarjevsky] from Doklady Akad. Nauk
S.S.R. 73, 743-6 (1950). 8p. (UCRL-Trans-90)

④ Chem

L 10311-66 EWT(m) DIAAP

ACC NR: AP5026404

SOURCE CODE: UR/0386/65/002/006/0266/0269

18
BAUTHOR: Dalidchik, F. I.; Sayasov, Yu. S.ORG: Institute of Chemical Physics, Academy of Sciences SSSR (Institut khimicheskoy fiziki Akademii nauk SSSR)TITLE: Exchange effect in elastic scattering of polarized identical nuclei 9SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniya, v. 2, no. 6, 1965, 266-269

TOPIC TAGS: elastic scattering, proton polarization, Coulomb interaction

ABSTRACT: In view of the increasing importance of experiments on the polarization of the products of direct nuclear reactions, for the purpose of explaining their concrete mechanism of determining the spectroscopic characteristics of the nuclei, the authors analyze theoretically the elastic scattering of Coulomb-interacting polarized identical particles. It is shown that when a completely polarized beam is scattered by a completely polarized target interference takes place only when the polarizations of the beam and the target coincide. This is the quantum analog of a fact well known in optics, that there is no interference between two light rays which are polarized in mutually perpendicular planes. In the general case it follows from the analysis that the intensity of the oscillations of the exchange term depends essentially on the degree of polarization of the beam and of the target, as illustrated in Fig. 1 for the case of particles with spin $I = 1$. This can serve as a basis for a new method of detecting polarization of slow charged particles. Since the procedure for ob-

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ACC NR: AP5026404

taining polarized targets is being continuously perfected and there are now already twenty different methods for accomplishing this, the proposed method can find application in a large group of experiments, including measurement of polarization of slow protons and of nuclei of light and medium elements, which is of particular importance in connection with the ever increasing use of multiply-charged ions in nuclear physics. Orig. art. has: 1 figure and 4 formulas.

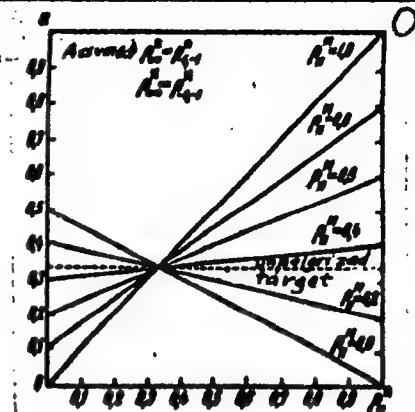


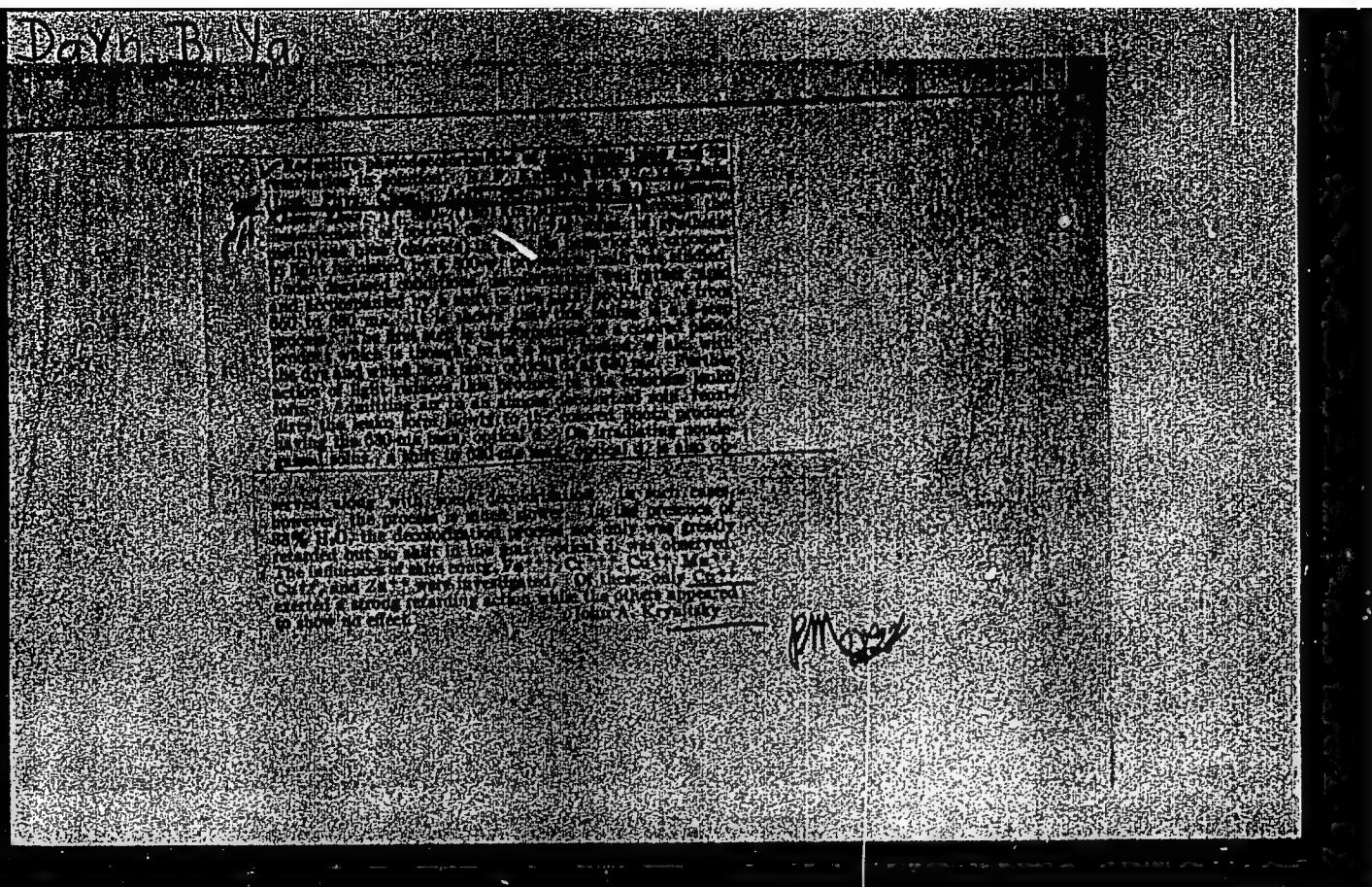
Fig. 1. Oscillation intensity vs. target polarization for particles with spin $I = 1$.

SC: 181 SUBM DATE: 19Jul165/ ORIG REF: 002/ OTH REF: 001

Card 2/4

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000509520017-2



APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000509520017-2"

DAYN, B. Ya.

U ~~o~~ ~~u~~ ~~u~~ ✓ The chemical nature and structure of the derivatives of molybdenum and tungsten blue. Z. M. Vaisberg and B. V. Datin. *Izvest. Selen. Plastiny i Drug. Blagorod. Metal. Akad. Nauk S.S.R., Inst. Obshchel i Neorg. Khim.* No. 26, 154-62 (1951). — By aid of a medium-sized Hilger spectrophotograph the ultraviolet absorption curves of phosphomolybdc, silicomolybdc, arsenomolybdc, phosphotungstic, silicotungstic, phosphomolybdovanadlc (I) acids, and the reduction products thereof, i.e. the various Mo and W blues, were plotted (200-450 m μ), also the compds. were analyzed. The various blues showed only a slight increase in the percentage of the constituents; e.g.: I before and after reduction, resp., contained Mo 50.2 and 50.8; P 1.50 and 1.56; V 2.35 and 2.40%. As the spectral curves are very similar to one another (the absorptions almost always obey Lambert-Beer's law), it is concluded that the original compds. and the blues produced therefrom have very similar structures. Therefore it is proposed to call the blues "heteropoly acids of the reduced series." W. J.

W. J.

DAIN, B. Ya.

USSR/Chemistry - Chlorophyll

21 Sep 51

"Photochemical Properties of the Iron-Chlorophyll Complex," M. S. Ashkinazi, B. Ya. Dain, Inst of Phys Chem Imeni Pisarzhevskiy, Acad Sci USSR

"Dok Ak Nauk SSSR" Vol LXXX, No 3, pp 385-388

The Iron-chlorophyll complex, prep'd by chem means in both the oxidized and the reduced form, gives absorption curves with intensity peaks at 610 millimicrons for the oxidized and 645 millimicrons for the reduced form. Upon exposure of the oxidized form to a 1,000 watt lamp, intensity peaks appeared at 640 - 650 millimicrons after 4 hrs of

USSR/Chemistry - Chlorophyll
(Contd)

21 Sep 51

exposure and at 610 millimicrons after 10 hrs of exposure. Visible light is capable of reducing the oxidized Iron-chlorophyll complex as shown by other absorption on curves. The same effect is produced by light from a mercury quartz lamp, only much faster. Temp between 10 - 22° has no effect on photo reduction.

210731

C.A.

Photochemistry of chlorophyll at liquid-air temperature
A. A. Kachan and B. Ya. Dain (I. V. Pisarhevskii
Phys.-Chem. Inst., Acad. Sci. Ukr. SSR, Kiev). *Doklady
Akad. Nauk S.S.R.* **80**, 610-622 (1951). - On cooling from
room to liquid-air temp., the absorption coeff. in the red
absorption band of chlorophyll (a + b) in soln. in EtOH
(0.040-0.078 g./l.) increases; prolonged irradiation with
visible or with near-ultraviolet light (high-pressure Hg lamp)
produces no further changes of absorption. Solns. of
chlorophyll in a 1:3 mixt. of EtOH with Et₂O show the
same increase of absorption in the red on cooling to liquid
air temp. In this mixed solvent, irradiation with near ultra-
violet at liquid-air temp. produces a decrease of the absorp-
tion in the red, which persists on standing in the dark at the
liquid-air temp., but disappears on warming up to room
temp. The change taking place on ultraviolet irradiation at
liquid-air temp. is attributed to dissociation of a pos. chloro-
phyll ion and an electron. If one assumes, with Terenin,
that the pos. ion splits off a proton, the stability of the
system at liquid-air temp. in the mixed EtOH + Et₂O
solvent appears to be due to a fixation of the proton by
Et₂O, in the form of the oxonium ion Et₂OH⁺. This process
does not take place in soln. in EtOH alone. Visible-light
quanta are insufficient to produce ionization, and can give
rise only to unstable excited states which may interact
with the solvent.
N. Thom

1. ASHKINAZI, M. S.; GLIKMAN, G. S.; DAYN, B. YA.
2. USSR (600)
4. Iron Salts
7. Nature of the interaction of chlorophyll with iron salts, Ukr. khim. zhur., 17, no. 1, 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

DAIN, B. YA.

(3)

Interaction of chlorophyll with iron salts. M. S. Ashkinazi, T. S. Glikman, and B. Ya. Dain. *Ukrain. Khim. Zhur.* 18, 49-54 (1952); cf. *C.A.* 45, 1209d. Reiteration of the previous statement that the changes in absorption spectra of chlorophyll on the addn. of Fe^{++} or Fe^{+++} are due to complex formation rather than oxidation-reduction phenomena.

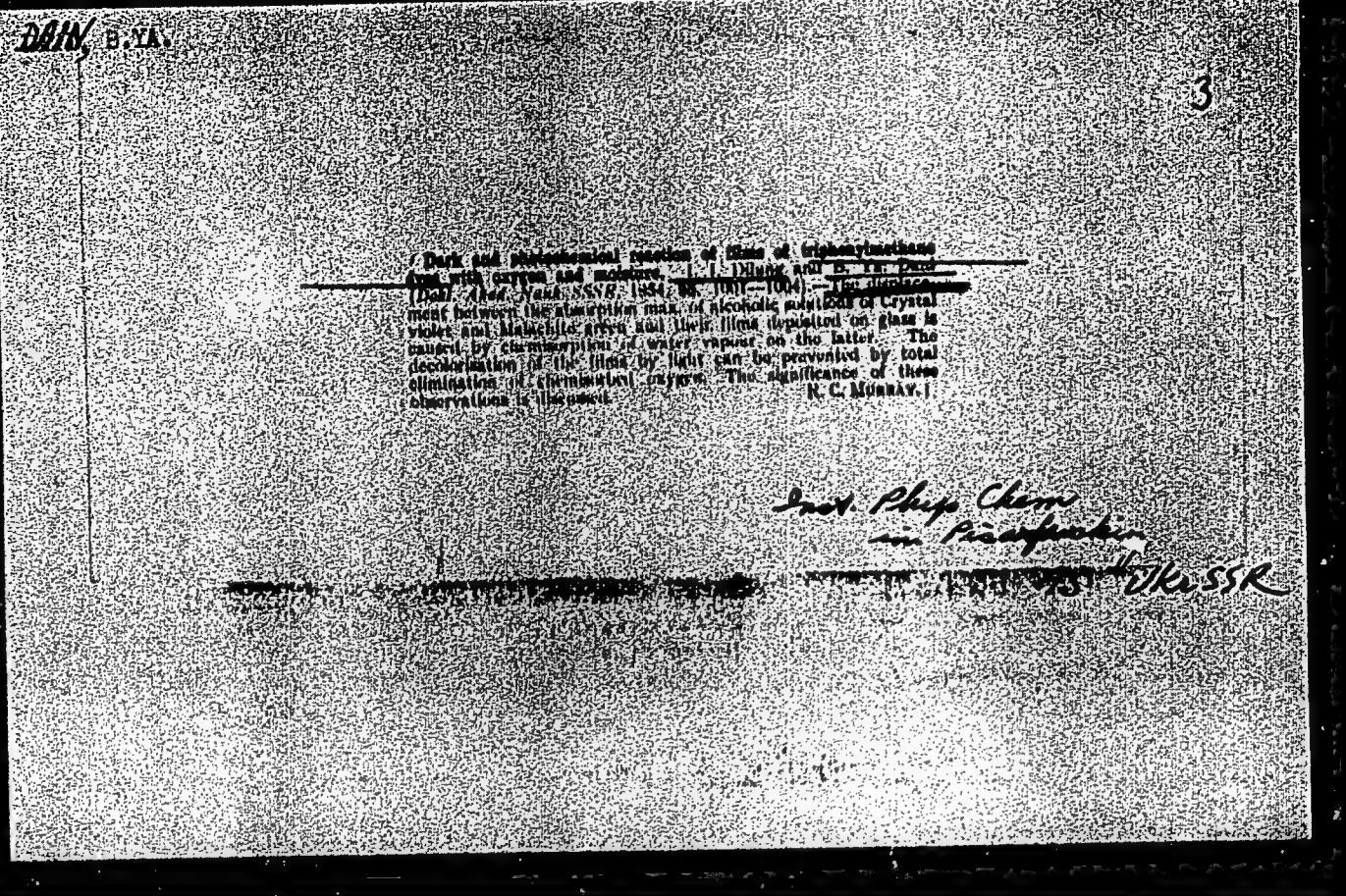
J. P. Danchy

Chemical Abst.
Vol. 48 No. 9
May 10, 1954
Biological Chemistry

DAIN, B.Ya.

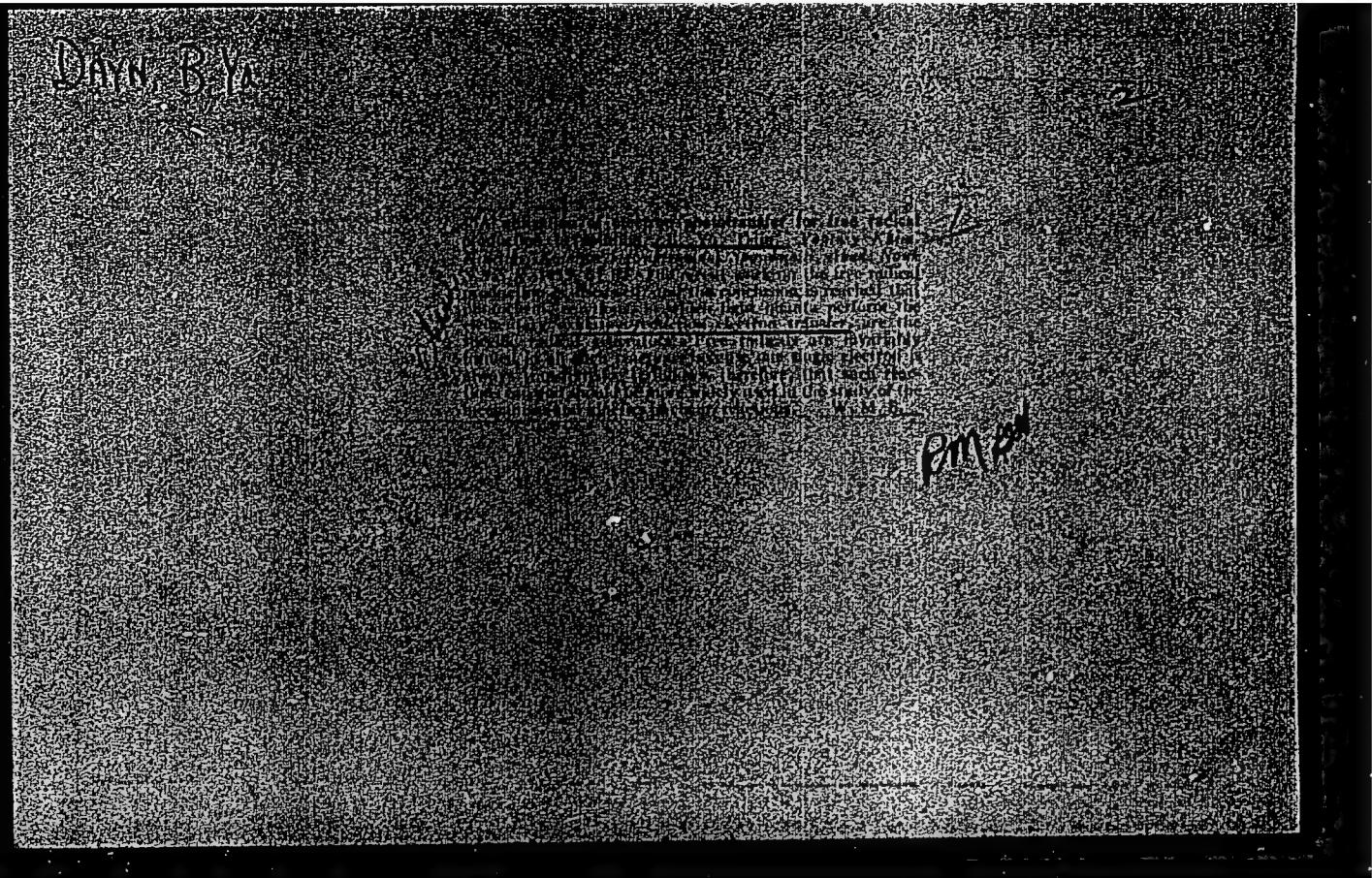
Research of T.D.Grotthus in photochemistry and the theory of colors.
Ukr.khim.zhur. 20 no.1:93-99 '54. (MLRA 7:3)

1. Institut fizicheskoy khimii im. L.V.Pisarshevskogo Akademii nauk
USSR. (Grotthus, Theodor D., 1785-1822)



"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000509520017-2



APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000509520017-2"

DAUN, B.YA.

USSR/ Chemistry - Physical chemistry

Card 1/1

Authors : Kostryukova, E. P.; and Daun, B. Ya.

Title : Photochemical reduction of thionine

Periodical : Ukr. khim. zhur. 21/1, 48-53, 1955

Abstract : The photochemical reduction of a thiazine type dye (thionine), possessing high light sensitivity in the visible zone of the spectrum was investigated during its reaction with ethyl alcohol, thiourea and glucose. It was found that the photochemical reduction reaction of the dye is unavoidably connected with the phototransfer of the hydrogen from the reducing agent to the molecule of the dye. The effect of temperature on the reduction process is explained. Seven references : 4 USSR and 3 USA (1925-1951). Tables; graphs; drawing.

Institution: Acad. of Sc., Ukr. SSR, The L.V.Pisarzhevskiy Institute of Phys. Chemistry

Submitted : February 20, 1954

DAVY, B. Y.

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R000509520017-2"

DAIN, B. Ya.

USSR / Physical Chemistry. Molecules. Chemical Bond.

B-4

Abs Jour : Ref Zhur - Khimiya, No 8, 1957, 25753

Author : M.S. Ashkinazi, I.P. Gerasimova, B.Ya. Dain.

Inst : Academy of Sciences of USSR

Title : Influence of Water on Absorption Spectrum and Photosensitivity of Iron Pheophorbide.

Orig Pub : Dokl. AN SSSR, 1956, 108, No 4, 655-658

Abstract : The absorption spectra of oxidized pheophorbide a (I) in alcohol, acetone, acetonitrile, chloroform (II), benzene and toluene in the range of 500 to 700 m μ were photographed. It was shown in accordance with earlier found regularities (RZhKhim, 1956, 25216) that the spectrum of carefully dehydrated I is characterized with the maximum absorption in range of 620 to 625 m μ . After an addition of water (III), the spectrum changes sharply, the maximum at 620 to 625 m μ disappears nearly completely and a band at 675 to 680 m μ appears simultaneously. The described effect is displayed in

Card : 1/2

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USSR / Physical Chemistry. Molecules. Chemical Bond.

B-4

Abs Jour : Ref Zhur - Khimiya, No 8, 1957, 25753

Abstract : various solvents to different degrees depending on the miscibility of the solvent with III. The authors ascribe the absorption at 675 to 680 mu to associations consisting of III and I molecules; in the authors' opinion, the formation of associations of molecules of I connected with molecules of III is also possible. It is shown that the reduction of I (appearance of absorption maximum at 650 mu; see above note) under the action of visible light takes place considerably easier in presence of III, in which occasion the spectrum of oxidized I always appears after the inlet of air. The photosensitivity of I in presence of III proves, in the authors' opinion, the specific influence of III not only on the spectra, but also on the photo-chemical behavior of I.

Card : 2/2

- 14 -

1. inst. fizicheskoy Khimii im. L.V. Pisaychukogo Akademii Nauk. USSR
Prof. akad. A. N. Tereninym.

AUTHORS: Butsko, S.S. and Dain, B.Ya. SOV/21-58-11-16/28

TITLE: Photochemical Reaction of a-Chlorophyll Oxidation by Ferric Chloride (Fotokhimicheskaya reaktsiya okisleniya khlorofilla a khlornym zhelezom)

PERIODICAL: Dopovidi Akademii nauk Ukrains'koi RSR, 1958, Nr 11,
pp 1221-1224 (USSR)

ABSTRACT: The irradiation with light of 400 to 370 m wavelength of acetone solutions of the mixtures of a-chlorophyll with $FeCl_3$, with an excess of the latter, leads to the formation of a red-colored photoproduct. This product is stable under vacuum conditions and preserves its characteristic spectrum for a long time. However, its contact with the air results in a sharp change of the spectrum. The spectrum of the final product is characteristic for ferric porphyrins (the position of peaks at 640; 580; 510 and 420 m). The rate of photo-reaction decreases with an increase in ferric salt concentration. A dark after-effect of the light is observed in the reaction. This indicates the formation in the course of the photochemical reaction of stable products which act as catalysts during the subsequent process in darkness.

Card 1/2 The authors assume that the red photoproduct is a chlorophyll

SOV/21-58-11-16/28

Photochemical Reaction of α -Chlorophyll Oxidation by Ferric Chloride

semi-oxidized in the 7 - 8 position of the IV ring.
There are 2 graphs and 3 references, 2 of which are Soviet
and 1 American.

ASSOCIATION: Institut fizicheskiy khimii imeni L.V. Pisarzhevskogo AN UkrSSR (Institute of Physical Chemistry imeni L.V. Pisarzhevskiy of the AS UkrSSR)

PRESENTED: By Member of the AS UkrSSR, A.I. Brodskiy

SUBMITTED: June 13, 1958

Note: Russian title and Russian names of individuals and institutions appearing in this article have been used in the transliteration.

Card 2/2

BUTSKO, S. S.; DAIN, B. Y.

Spectrophotometric analysis of chlorophyll interactions with iron.
Zhur. ob. khim. 28 no.9:2603-2611 S '58. (MIRA 11:11)

1. Institut fizicheskoy khimii AN USSR.
(Chlorophyll) (Iron)

DAIN, B. Ya.

5(3)

AUTHORS: Glikman, T. S., Podlinskyeva, M. Ye., SOV/79-29-6-4/72
Dain, B. Ya.

TITLE: Spectrophotometric Investigation of Reversible and Irreversible Conversions of Sulfophthalocyanine of Iron (III) in Aqueous Solution (Spektrofotometricheskoye issledovaniye obratimykh i neobratimykh prevrashcheniy sul'foftalotsianina zheleza (III) v vodnom rastvore)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 6, pp 1785-1793
(USSR)

ABSTRACT: The phthalocyanines belong to the small number of dyes which resemble, as to their structure, the natural pigments of the porphyrin class. In that connection many scientists tried to use these compounds as model of these pigments (Ref 1) in order to investigate more thoroughly the compounds of this kind if they are not combined with proteins. In this regard the iron phthalocyanines were of special interest; they are closely related with the hemins the part of which in the biological redox processes is well-known. The sulfonated derivatives of these dyes which are readily soluble in water show a number of interesting peculiarities which are based

Card 1/3

Spectrophotometric Investigation of Reversible and SOV/79-29-6-4/72
Irreversible Conversions of Sulfophthalocyanine of Iron (III) in Aqueous
Solution

on the fact, that they are capable of reversible and irreversible reactions in the dark and especially in the light. Since the solutions of the sulfonated derivatives of the iron-phthalocyanine are intensely colored the spectrophotometric method is most suitable for their investigation. In this paper the results of this spectrophotometric investigation of aqueous solutions of these compounds, and of the conversions taking place in them are described. It was found that the aqueous solutions of the ferri-sulfo-phthalocyanine (III) represent systems in the state of a hydrolytic equilibrium. The hydroxide of the ferri-phthalocyanine (III) which is formed on hydrolysis is unstable and decomposes slowly and yields ferro-sulfophthalocyanine (II) and the free hydroxyl. Exposure to light accelerates this process. The formation of free radicals on standing of the solutions of ferri-sulfo-phthalocyanine (III) which had been outgassed in the vacuum was confirmed by introduction of polymerization chains. The spontaneous decomposition of the hydroxide is the cause of the ~~instable~~ behavior of the aqueous solutions

Card 2/3

Spectrophotometric Investigation of Reversible and SOV/79-29-6-4/72
Irreversible Conversions of Sulfophthalocyanine of Iron (III) in Aqueous
Solution

of sulfophthalocyanine of the trivalent iron and the cause
of their slow decolorization in the air. There are 6 figures
and 12 references, 3 of which are Soviet.

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk Ukrainskoy SSR
(Institute of Physical Chemistry of the Academy of
Sciences, Ukrainskaya SSR)

SUBMITTED: May 12, 1958

Card 3/3

DAIN, B. Ya. (Prof.)(USSR)

"Photochemistry of Me-complexes of Chlorophyll."

report to be submitted for the Photosynthesis Symposium, 5th Int'l. Congress of Biochemistry, Moscow, 10-16 Aug 1961.

KRYUKOV, A.I.; DAIN, B.Ya.

Photochemical reduction of ferric chloride in aromatic hydrocarbons.
Dokl.AN SSSR 138 no.1:153-155 My-Je '61. (MIRA 14:4)

1. Institut fizicheskoy khimii im. L.V.Pisarzhevskogo AN USSR.
Predstavлено академиком A.N.Tereninym.

(Iron chloride)

(Photochemistry)